Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-19 (canceled)

20. (currently amended) A system for protecting against short circuit in an electric power distribution architecture having a first battery assembly B1 for generating a first voltage level, a second battery assembly B2 for generating a second voltage level that is substantially higher than the first voltage level, a converter DC/DC coupled between the first and second battery assemblies, and at least one power distribution unit (10), (20), (30) for receiving at least one of the first and second voltage levels, the system comprising:

a module SMM operably coupled to:

the converter DC/DC having an input operably coupled to the second battery assembly and an output coupled to the first battery assembly, wherein the converter DC/DC is adapted to generate a first voltage signal indicative of an amount of voltage measured at the output that is compared to a first predetermined voltage range of the first voltage level and to generate a second voltage signal indicative of an amount of voltage measured at the input that is compared to a second predetermined voltage range of the second voltage level; and

at least one power distribution unit (10), (20), (30) operably coupled to at least one load (12), (22), (23), (32), (33),

wherein the module SMM is adapted to assess a state of the DC/DC converter for determining the presence of a short circuit condition in the architecture and to control the at least one power distribution unit to connect/disconnect the at least one load [[loads]] in response to the first and second voltage signals.

21. (previously presented) The system of claim 20 wherein the module SMM is further adapted to measure a voltage across a first battery positioned within the first battery assembly for comparison to a predefined voltage level in response to receiving at least one of the first voltage signal indicating that the measured voltage at the output of the converter

DC/DC exceeds the first predetermined voltage range and the second voltage signal indicating that the measured voltage at the input of the converter DC/DC exceeds the second predetermined voltage range.

22. (previously presented) The system of claim 21 wherein the module SMM is further adapted to measure an input current across the first battery and to compare the measured input current to a predetermined load current in response to determining that the measured voltage across the first battery is below the predefined voltage level.

23. (currently amended) The system of claim 22 wherein the module SMM is further adapted to control the at least one power distribution unit (10), (20), (30) to selectively disconnect the at least one load [[loads]] (12), (22), (23), (32), (33) in response to the module SMM determining that the measured input current is above the predetermined load current.

24. (currently amended) The system of claim 23 wherein the module SMM is coupled to the second battery assembly and the module SMM is further adapted to control the second battery assembly to disconnect itself in response to determining that the measured input current is above the predetermined load current after the module SMM disconnects the at least one load [[loads]] (12), (22), (23), (32), (33).

25. (currently amended) The system of claim 23 wherein the module SMM is further adapted to control the at least one power distribution unit (10), (20), (30) to selectively reconnect the at least one of the loads (12), (22), (23), (32), (33) and to assess the measured input current to determine if the measured input current is above the predetermined load current while selectively reconnecting the loads.

26. (currently amended) The system of claim 25 wherein the module SMM is further adapted to control the at least one power distribution unit (10), (20), (30) to measure at least one of a voltage and impedance across each load that is reconnected and to compare the at least one of the measured voltage and the measured impedance to predetermined thresholds.

27. (previously presented) The system of claim 26 wherein the module SMM is further adapted to control the power distribution unit to disconnect each reconnected load in response to determining that the at least one of the measured voltage and the measured impedance across each load (12), (22), (23), (32), (33) exceeds the predetermined thresholds.

28. (canceled)

29. (canceled)

30. (currently amended) A method for protecting against short circuit in an electric power distribution architecture including a first battery assembly B1 for generating a first voltage level, a second battery assembly B2 for generating a second voltage level that is substantially higher than the first voltage level, a converter DC/DC coupled between the first and second battery assemblies, and at least one power distribution unit (10), (20), (30) for receiving at least one of the first and second voltage levels, the method comprising:

receiving a first voltage signal which corresponds to an amount of voltage measured from an output of the converter DC/DC that is compared to a first predetermined voltage range of the first voltage level,

receiving a second voltage signal which corresponds to an amount of voltage measured from an input of the converter DC/DC that is compared to a second predetermined voltage range of the second voltage level; [[and]]

assessing a state of the converter DC/DC to determine the presence of a short circuit condition in the architecture in response to the first and second voltage signals; and

controlling the at least one the power distribution unit to connect/disconnect at least one load (12), (22), (23), (32), (33) in response to the first and second voltage signals.

31. (previously presented) The method of claim 30 further comprising measuring a voltage across a first battery positioned within the first battery assembly for comparison to a predefined voltage level in response to receiving at least one of the first voltage signal indicating that the measured voltage at the output of the converter DC/DC exceeds the first

predetermined voltage range and the second voltage signal indicating that the measured voltage at the input of the converter DC/DC exceeds the second predetermined voltage range.

32. (previously presented) The method of claim 31 further comprising measuring an input current across the first battery and comparing the measured input current to a predetermined load current in response to determining that the measured voltage across the first battery is below the predefined voltage level.

33. (canceled)

34. (previously presented) The method of claim 32 further comprising controlling the second battery assembly to disconnect itself in response to determining that the measured input current is above the predetermined load current after controlling the power distribution unit to disconnecting the at least one load (12), (22), (23), (32), (33).

35. (currently amended) The method of claim 34 further comprising controlling the power distribution unit (10), (20), (30) to selectively reconnect the at least one ~~of the loads~~ load (12), (22), (23), (32), (33) and to assess the measured input current to determine if the measured input current is above the predetermined load current while selectively reconnecting the loads.

36. (currently amended) The system of claim 35 further comprising controlling the at least one power distribution unit (10), (20), (30) to measure at least one of a voltage and impedance across each load (12), (22), (23), (32), (33) that is reconnected and to compare the at least one of the measured voltage and the measured impedance to predetermined thresholds.

37. (previously presented) The method of claim 36 further comprising controlling the power distribution unit to disconnect each reconnected load in response to determining that the at least one of the measured voltage and the measured impedance across each load (12), (22), (23), (32), (33) exceeds the predetermined thresholds.

38. (canceled)

39. (currently amended) A method for protecting against short circuit in an electric power distribution architecture including a first battery assembly B1 for generating a first voltage level, a second battery assembly B2 for generating a second voltage level that is substantially higher than the first voltage level, a converter DC/DC coupled between the first and second battery assemblies, and at least one power distribution unit (10), (20), (30) for receiving at least one of the first and second voltage levels to connect/disconnect at least one load (12), (22), (23), (32), (33), the method comprising:

receiving a first voltage signal which corresponds to an amount of voltage measured from an output of the converter DC/DC that is compared to a first predetermined voltage range of the first voltage level,

receiving a second voltage signal which corresponds to an amount of voltage measured from an input of the converter DC/DC that is compared to a second predetermined voltage range of the second voltage level;

assessing a state of the converter DC/DC in response to the first and second voltage signals;

determining the presence of a short circuit condition if at least of one the first voltage signal indicates that the measured that the measured voltage at the output of the converter DC/DC exceeds the first predetermined value and the second voltage signal indicates that the measured voltage at the input of the converter DC/DC exceeds the second predetermined value;

controlling the at least one power distribution unit (10), (20), (30) to control the at least one load (12), (22), (23), (32), (33) to remain connected in response to the at least of one the first voltage signal indicating that the measured that the measured voltage at the output of the converter DC/DC exceeds the first predetermined value and the second voltage signal indicating that the measured voltage at the input of the converter DC/DC exceeds the second predetermined value;

measuring a voltage across a first battery within first battery assembly to continue to confirm the presence of the short circuit condition, wherein the measured voltage across the battery is compared to a predefined voltage level in response to controlling the at least

one power distribution unit (10), (20), (30) to control the at least one load (12), (22), (23), (32), (33) to remain connected;

measuring an input current across the first battery to continue to confirm the presence of the short circuit condition and to compare the measured input current to a predetermined load current in response to determining that the measured voltage across the first battery is below the predefined voltage level; [[and]]

controlling the at least one power distribution unit (10), (20), (30) to selectively disconnect the at least one load (12), (22), (23), (32), (33) in response to determining that the measured input current is above the predetermined load current;

measuring a load impedance of the at least one load prior to reconnecting the at least one load; and

comparing the measured load impedance of the at least one load to a predetermined impedance range prior to reconnecting the at least one load to prevent damage to the at least one load in the event the measured impedance is not equal to a value within the predetermined impedance range.

40. (new) The system of claim 20 wherein the module SMM is further adapted to control the at least one power distribution unit to connect/disconnect the loads via at least one power switch in response to the first and the second voltage signals.

41. (new) The system of claim 40 wherein the at least one power distribution unit measures an output of the at least one power switch to determine load impedance of the at least one load coupled to the output of the at least one power switch in response to the module SMM controlling the at least one power distribution unit to disconnect the at least one load, and the at least one power distribution unit compares the measured load impedance of the at least one load to a predetermined impedance range prior to reconnecting the at least one load to prevent damage of the at least one load in the event the measured impedance is not equal to a value within the predetermined impedance range.

42. (new) The method of claim 30 wherein controlling the at least one power distribution unit to connect/disconnect the at least one load in response to the first and second

voltage signals further comprises controlling the at least one power distribution unit to connect/disconnect the at least one load with at least one power switch.

43. (new) The method of claim 42 further comprising measuring an output of the at least one power switch to determine a load impedance of the at least one load coupled to the output of the at least one power switch in response to controlling the at least one power distribution unit to disconnect the at least one load based on the first and the second voltage signals and comparing the measured load impedance to a predetermined impedance range prior to reconnecting the at least one load to prevent damage of the at least one load in the event the measured impedance is not equal to a value within the predetermined impedance range.